NIIST moots a proposal to set up a novel Centre for Phytochemicals and Ayurveda

CSIR-NIIST

In a novel initiative, CSIR- National Institute of Interdisciplinary Science and Technology (NIIST) has mooted a proposal to set up a new 'Centre for Phytochemicals and Ayurveda' at its campus in Pappanacode. The proposal awaits central nod soon.

"The proposal to set up the new Centre for Phytochemicals and Ayurveda at NIIST here has been submitted to the Council for Scientific and Industrial Research (CSIR). The aim of setting up such an institute to scientifically validate and improve the efficacy of Ayurvedic products for health care and of medicinal value. Though prepared from natural herbs and medicinal plants, scientific trials and validation can check even the minimal side effects that any medication can cause," CSIR-NIIST director Dr A Ajayaghosh told TOI. It is intended to test the efficacy of phytochemicals or chemical compounds extracted chemicals from the natural plants before releasing an ayurvedic product.

Pegged at an estimated project cost of Rs 25 crore, the new Centre proposed will be an interdisciplinary project pooling in the scientific knowledge of existing centres at the institute including chemical sciences, bio-tech, life sciences, natural and agro-processing, he said.



"Once we get the nod from our parent CSIR, we will also approach other funding agencies including Department of Science and Technology (DST) and Department of Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy (AYUSH)," he said. It requires funding to construct a separate building, infrastructure, research facilities and for manpower, he said.

The new Centre proposed will help in quality control with technology up-gradation, modernisation and value-addition of Ayurveda products. The process for that has already begun with the support of existing centres at the institute, mainly with agro-processing and technology and the new centre planned will be a full-fledged, he said.

NIIST Agro-processing and Natural products division head and chief scientist MM Sreekumar told TOI that from an ingredient pepper, its aqueous extracts are taken for preparing Ayurvedic medicines and the resulting spent raw material is a rich source of active ingredients like piperin which are not water soluble. These can be effectively isolated and value realized which in turn will bring down the cost of the Ayurvedic preparations. In another case, certain preparations are ground for 90 days to achive certain characterises like fineness and by scientifically establishing the parameters like particle size, suitable machinery can be identified to have the same desired effect in a much faster way.

The latest in NIIST scientific support for modernisation and validation of ayurvedic products is the tie-up with the company Sreedhareeyam ayurvedics. He indicates that it was following the success of NIIST technology in modernising the commercial processing facility of Brahmin's Food Products Private Ltd by creating a breakfast mix unit that rolled out delicacies such as puttu or steam cakes effectively at a faster pace compared to traditional mechanised modes.



NIO to study impact of coastal projects on ecology

CSIR-NIO

State govt. appoints experts after environmentalists raise objections

Facing criticism from environment protection activists over the implementation of some of the city's big-ticket coastal projects, the State government has appointed the National Institute of Oceanography (NIO) to study the impact of its plans on the marine ecosystem.

Infrastructure projects worth an estimated Rs. 70,000 crore are in the launching stage, and likely to be flagged off with an eye on the civic polls next year. However, many of these continue to face the ire of environmentalists, who allege irreparable damage to marine ecology due to land reclamation and construction along the coast as part of project planning and construction, officials said.

Goa-based NIO will survey coastal projects including the Rs. 13,000-crore Mumbai Coastal Road, the Rs. 12,000-crore Mumbai Trans Harbour Link (MTHL) and the Navi Mumbai International Airport (NMIA), which is expected to cost Rs. 16,000 crore, among others. Its experts will study the impact of projects and resulting land reclamation and damage to coastal flora and fauna, if any, from big projects. "We have already finalised the scope of their work, and have finalised the release of the first instalment on Thursday for work to begin," a senior official said.



This is not the first survey in Mumbai for NIO, which is already conducting a magnetic survey of navigational channels in Mumbai Harbour, a marine impact study for a proposed oil berth at Jawahar Dweep, demarcation of the high tide line (HTL) under the Coastal Regulation Zone (CRZ) for construction of schools and colleges on Yari Road. "The preparations for the Mumbai study on land reclamation have already begun," an official said.

Infrastructure projects along Mumbai's coast worth an estimated

Rs. 70,000 crore are in the launching stage

CCMB to establish 'Innovation hub' in Hyderabad to boost start-ups in medical biotechnology

CSIR-CCMB

The Center for Cellular and Molecular Biology (CCMB) is all set to start I-Hub called 'Innovation hub' in Hyderabad. According to CCMB scientists, the main aim of I-Hub is to give a platform to the start-up companies and new entrepreneurs innovating in the field of medical biotechnology. In fact, this concept is similar to that of the T-Hub, which was set up in Gacchibowli IT centre last year to encourage IT start-up companies and boost the innovations in the field of Information Technology (IT) sector.

Encouraged by the success of the T-Hub platform established by the Telangana state government, the CCMB has also conceptualized a similar policy to encourage and boost start-ups in the medical biotechnology. "Indian scientists have developed a lot of innovative and new findings and also have acquired patents. However due to lack of funding and basic infrastructure facilities not many come forward to translate research findings into business ventures. However, with the launch of I-Hub, we are expecting that many new start ups and innovators will get a platform to groom and build themselves into robust industrial players in the field of medical biotechnology," said Dr K Rakesh Mishra, CCMB director.

The I-Hub is a five storied building which is equipped with advanced laboratory equipments for research and innovations. Interested scientists, research scholars and students can utilize the equipment by paying nominal fees. For assisting the new start-up industries, CCMB authorities have also appointed experts and already tied up with two companies to start their work.



The CCMB authorities are planning to launch the I-Hub on Friday at its premises at Uppal in Hyderabad. Not just start-ups of scientists and students, the I-Hub will also have incubation centers of existing biotech companies to translate research findings into business ventures. As part of this, the DNA diagnostics has tied up with government hospitals like NIMS and Gandhi, particularly for pre-natal diagnostics, clinical research facility and other wings of applied biotechnology.

The CCMB director further added that the innovation hub would facilitate application-oriented research in association with biotech companies, hospitals and start-ups. "Apart from sophisticated equipment available for use, our experts will interact with companies, depending on the need. In pre-natal diagnostics, we are testing the amniotic fluid collected and sample sent by hospitals for genetic diseases. However, for the future we are working on developing technology to identify and isolate fetal cells in the blood of mother to do pre-natal diagnosis instead of testing from amniotic fluid. A blood sample will do if we can develop this method," said Dr. Mishra.

Overall, the I-Hub will have a common research and technology development centre as well as the diagnostics and clinical research facilities at one place. Very soon the CCMB authorities are also planning to start training programmes in the areas of bio-informatics, forensic sciences and cell biology to help researchers and students.

Process to select this year's best State University for Chancellor Award has begun: Governor

CSIR-NIIST

The process for selecting the Best University in Kerala for the Chancellor Award in the current year has begun and the government has earmarked Rs 5 crore for that, said Governor P Sathasivam.

Inaugurating the foundation day fete of National Institute of Interdisciplinary Science and Technology (NIIST), he said that in the last four decades since its inception in 1975 as a CSIR complex, NIIST has made rapid strides in developing scientific innovations for the benefit of society. He stressed on the need for grass root innovation and value-addition.

Further on the selection of the Best University in the state, he said the process will be posted on the website by October end. The best University will be selected by a committed team constituted with leading academicians who had served as heads of reputed institutes along with Rajbhavan officials. The process will be complete by November and before this Christmas, the best University will be selected and conferred the award. The parameters for selecting the best university will include infrastructure, faculty staff, research work and students' performance and their employability among others, he said.

The Governor urged the young scientists to strictly adhere to ethical practises and credibility of research even under tremendous pressure to perform. It is imperative that they remain brave to publish even the negative results. He also stressed on the need for more societal interaction to deliver the fruits of research to the common man to change the public perception that 'the scientists are sitting in ivory towers'. He also released the CSIR-NIIST's annual report 2015-16.



Research institutions like NIIST shall continue to develop technologies for preservation and value-addition of Agricultural products to ensure better livelihoods to farmers to avoid distress sale of their produce. He congratulated NIIST researchers for utilizing the bio-diversity of Kerala effectively for developing technologies for Ayurveda, natural products and nutraceuticals sectors. He was very appreciative about the anaerobic digester developed by NIIST, having read from newspapers, that it would address the burning issue of waste management in Kerala. He also congratulated NIIST for developing the bio-process for converting black and green Pepper to white pepper, which has a huge export market and bio-retting of coconut husk which is environment friendly. He said the contribution of NIIST to basic science and laurels fetched by the researchers are commendable.

CSIR-NIIST director Dr A Ajayaghosh reminded the researchers reminded the researchers about the Prime Minister's advice to CSIR on the need for timely delivery of technologies and products suitable to the society. He also highlighted the efforts of CSIR-NIIST in the sustainable utilization of regional resources and cooperation of industries in the need based technology development. Chief scientist Dr. A Sunderesan thanked all the participants.